ABSTRACT

    For IC devices that have repeating structures, a method
of generating a database for making a mask layer starts with
a hierarchical database describing at least one repeating
element in the layer, a skeleton that surrounds the
repeating elements, and instructions as to where to locate
the repeating elements within the skeleton. This database
is modified to generate a database that has optical
proximity correction (OPC) for diffraction of light that
will pass through the mask and expose photoresist on the IC
layer. The optical-proximity corrected mask database is
fractured by a mask house using instructions on how the
modified data base will be divided to form repeating
elements that are still identical after OPC, a mask skeleton
that includes non-repeating elements, and instructions for
placement of the repeating elements in the skeleton. Thus
the resulting mask database is smaller than a mask database
that includes all copies of repeating elements.